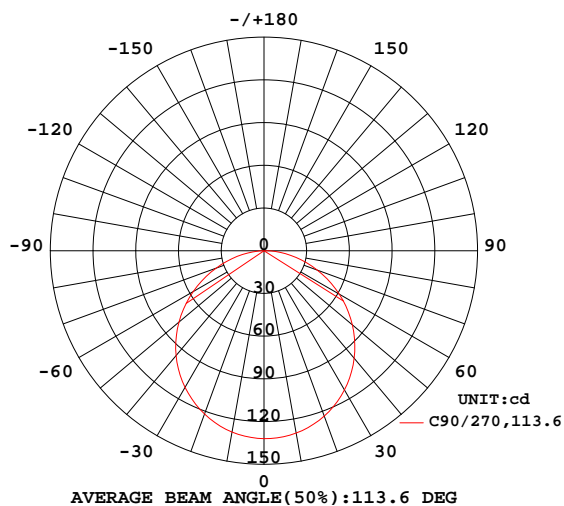


LUMINAIRE PHOTOMETRIC TEST REPORT

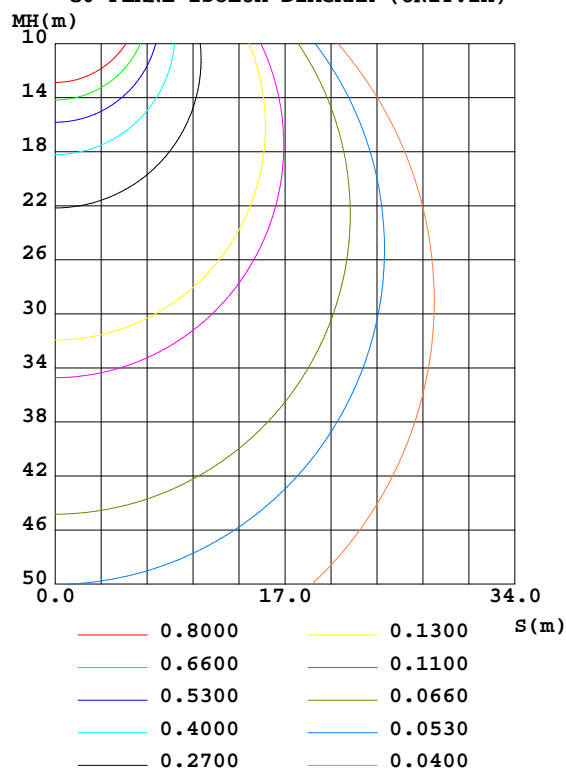
NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-83.3-W	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 60.61 lm/W			
MODEL	5050	Imax(cd)	132.6	S/MH(C0/180)	1.27
NOMINAL POWER(W)	22	LOR(%)	97.1	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	389.77	η UP,DN(C0-180)	0.3,48.9
NOMINAL FLUX(lm)	401.27	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.3,47.7
LAMPS INSIDE	1	η up(%)	0.6	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	96.6	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:29 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	130.1	130.3	130.1	130.7	130.6	130.1	129.3	129.9	0- 10	12.53	12.53	3.22,3.12
20	123.2	123.7	123.6	124.2	124.0	123.3	122.1	122.8	10- 20	35.94	48.47	12.4,12.1
30	112.0	113.0	113.0	113.5	113.1	112.1	110.8	111.6	20- 30	54.57	103.0	26.4,25.7
40	97.34	98.51	98.54	98.96	98.42	97.39	96.06	96.83	30- 40	66.02	169.1	43.4,42.1
50	79.59	80.94	80.97	81.36	80.77	79.52	77.96	79.01	40- 50	68.87	237.9	61,59.3
60	59.36	60.95	61.11	61.32	60.64	59.05	57.38	58.58	50- 60	62.75	300.7	77.1,74.9
70	37.54	39.45	39.93	39.80	38.86	37.29	35.81	36.86	60- 70	48.61	349.3	89.6,87
80	16.53	18.48	19.15	18.77	17.66	16.51	15.35	16.08	70- 80	29.13	378.4	97.1,94.3
90	0.2490	1.969	2.844	2.215	0.8819	1.324	1.212	1.046	80- 90	9.115	387.5	99.4,96.6
100	0.1152	0.3958	0.4892	0.6123	0.8233	0.5737	0.2782	0.2877	90-100	0.7660	388.3	99.6,96.8
110	0.1976	0.1376	0.0160	0.3142	0.7592	0.3449	0.0055	0.1310	100-110	0.3346	388.6	99.7,96.9
120	0.2966	0.1697	0.0187	0.3368	0.6977	0.3449	0.0213	0.1618	110-120	0.2396	388.9	99.8,96.9
130	0.3315	0.2139	0.0696	0.3395	0.6122	0.3435	0.0986	0.2138	120-130	0.2360	389.1	99.8,97
140	0.3369	0.2486	0.1017	0.3302	0.5374	0.3516	0.1122	0.2220	130-140	0.2159	389.3	99.9,97
150	0.3396	0.2607	0.2111	0.3261	0.4518	0.3276	0.2030	0.2433	140-150	0.1811	389.5	99.9,97.1
160	0.3236	0.2793	0.2754	0.2995	0.4088	0.3289	0.2726	0.2647	150-160	0.1368	389.6	100,97.1
170	0.3209	0.2981	0.3289	0.3235	0.3476	0.3502	0.3209	0.2941	160-170	0.0880	389.7	100,97.1
180	0.3502	0.3716	0.4064	0.3623	0.3823	0.3810	0.4010	0.3703	170-180	0.0320	389.8	100,97.1
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 210.62 lm

%lum = 54.0%

%lamp = 52.5%

Conical surface Flux(120deg): 300.68 lm

%lum = 77.1%

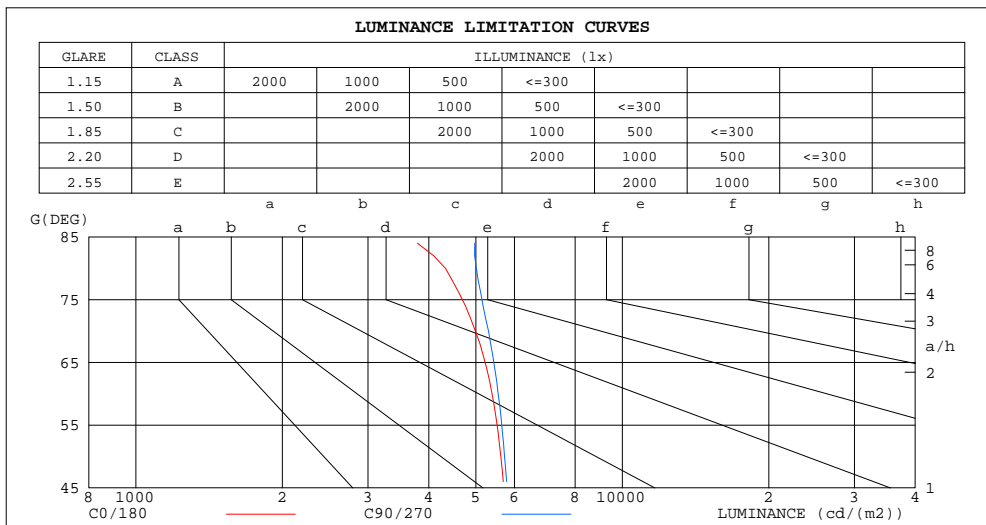
%lamp = 74.9%

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Dillon
 Test Date:29 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 γ Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:6.950m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8BYBW	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	4547	5964
80	4328	5013
75	5068	5510
70	4990	5307
65	5461	5673
60	5396	5555
55	5688	5804
50	5628	5726
45	5824	5905

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Dillon
Test Date: 29 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.446
Humidity: 65.0%
Test Distance: 6.950m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8TYBBW	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

pcc	80%	70%	50%	30%	10%	0
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pfc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio Wall Exitance Coefficients(WEC)					
0.0						
1.0	.309 .175 .056	.302 .172 .055	.288 .165 .053	.276 .159 .051	.265 .154 .050	
2.0	.288 .158 .048	.282 .155 .048	.270 .150 .047	.260 .146 .046	.250 .141 .045	
3.0	.266 .141 .042	.260 .139 .042	.250 .135 .041	.240 .132 .040	.231 .128 .040	
4.0	.245 .127 .037	.240 .125 .037	.231 .122 .037	.222 .119 .036	.214 .116 .035	
5.0	.226 .115 .033	.221 .114 .033	.213 .111 .033	.206 .109 .032	.199 .106 .032	
6.0	.209 .105 .030	.205 .104 .030	.198 .101 .030	.191 .099 .029	.185 .097 .029	
7.0	.194 .096 .027	.191 .095 .027	.184 .093 .027	.178 .091 .027	.173 .090 .026	
8.0	.181 .089 .025	.178 .088 .025	.172 .086 .025	.167 .085 .024	.162 .083 .024	
9.0	.170 .082 .023	.167 .081 .023	.162 .080 .023	.157 .079 .023	.152 .077 .022	
10.0	.160 .077 .021	.157 .076 .021	.152 .075 .021	.148 .073 .021	.144 .072 .021	

pcc	80%	70%	50%	30%	10%	0
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pfc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio Ceiling Cavity Exitance Coefficients(CCEC)					
0.0	.189 .189 .189	.162 .162 .162	.110 .110 .110	.063 .063 .063	.020 .020 .020	
1.0	.180 .156 .134	.154 .134 .115	.105 .092 .080	.061 .053 .046	.019 .017 .015	
2.0	.172 .132 .099	.148 .114 .085	.101 .079 .060	.058 .046 .035	.019 .015 .011	
3.0	.165 .115 .076	.141 .100 .066	.097 .069 .046	.056 .040 .027	.018 .013 .009	
4.0	.157 .102 .061	.135 .089 .053	.093 .062 .037	.054 .036 .022	.017 .012 .007	
5.0	.150 .092 .050	.129 .080 .043	.089 .056 .031	.051 .033 .018	.017 .011 .006	
6.0	.143 .084 .042	.123 .073 .037	.085 .051 .026	.049 .030 .015	.016 .010 .005	
7.0	.136 .078 .036	.117 .067 .032	.081 .047 .023	.047 .028 .013	.015 .009 .004	
8.0	.130 .072 .032	.112 .062 .028	.077 .044 .020	.045 .026 .012	.015 .008 .004	
9.0	.124 .067 .029	.107 .058 .025	.074 .041 .018	.043 .024 .011	.014 .008 .004	
10.0	.119 .063 .026	.102 .055 .023	.071 .039 .016	.041 .023 .010	.013 .007 .003	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:29 July 2021

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8BYBBW						WEIGHT: 0.570kg/m					
SPEC.:						DIM.: 22*19mm		SERIAL No.:			
MFR.: CLEAR						SUR.: 22*1000mm		Shielding Angle:			
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room dimensions		Viewed crosswise					Viewed endwise				
x = 2H y = 2H		22.0	23.5	22.3	23.8	24.0	22.1	23.6	22.4	23.9	24.1
3H		23.6	25.0	23.9	25.2	25.5	23.8	25.2	24.1	25.4	25.7
4H		24.2	25.6	24.5	25.8	26.1	24.4	25.8	24.8	26.1	26.3
6H		24.7	26.0	25.0	26.2	26.5	25.0	26.3	25.3	26.6	26.8
8H		24.8	26.1	25.2	26.4	26.7	25.2	26.4	25.6	26.7	27.0
12H		24.9	26.1	25.3	26.4	26.7	25.4	26.5	25.7	26.8	27.2
4H 2H		22.7	24.0	23.0	24.3	24.6	22.7	24.1	23.1	24.4	24.6
3H		24.4	25.6	24.8	25.9	26.2	24.6	25.8	24.9	26.1	26.4
4H		25.2	26.3	25.6	26.6	27.0	25.4	26.5	25.8	26.8	27.2
6H		25.8	26.8	26.2	27.1	27.5	26.1	27.1	26.5	27.4	27.8
8H		26.0	26.9	26.4	27.3	27.7	26.4	27.3	26.8	27.7	28.1
12H		26.1	27.0	26.6	27.4	27.8	26.6	27.4	27.0	27.8	28.2
8H 4H		25.5	26.4	25.9	26.8	27.2	25.7	26.6	26.1	27.0	27.4
6H		26.3	27.1	26.8	27.5	27.9	26.6	27.3	27.0	27.7	28.2
8H		26.6	27.3	27.1	27.7	28.2	27.0	27.6	27.4	28.1	28.5
12H		26.8	27.4	27.3	27.9	28.3	27.3	27.8	27.8	28.3	28.8
12H 4H		25.6	26.4	26.0	26.8	27.2	25.7	26.6	26.2	26.9	27.4
6H		26.4	27.1	26.9	27.5	28.0	26.7	27.3	27.1	27.8	28.2
8H		26.8	27.3	27.2	27.8	28.3	27.1	27.7	27.6	28.1	28.6
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H		+ 0.1 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 401.3 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -3.2)
Area: 0.022 m2

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:29 July 2021

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8TYBBW	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

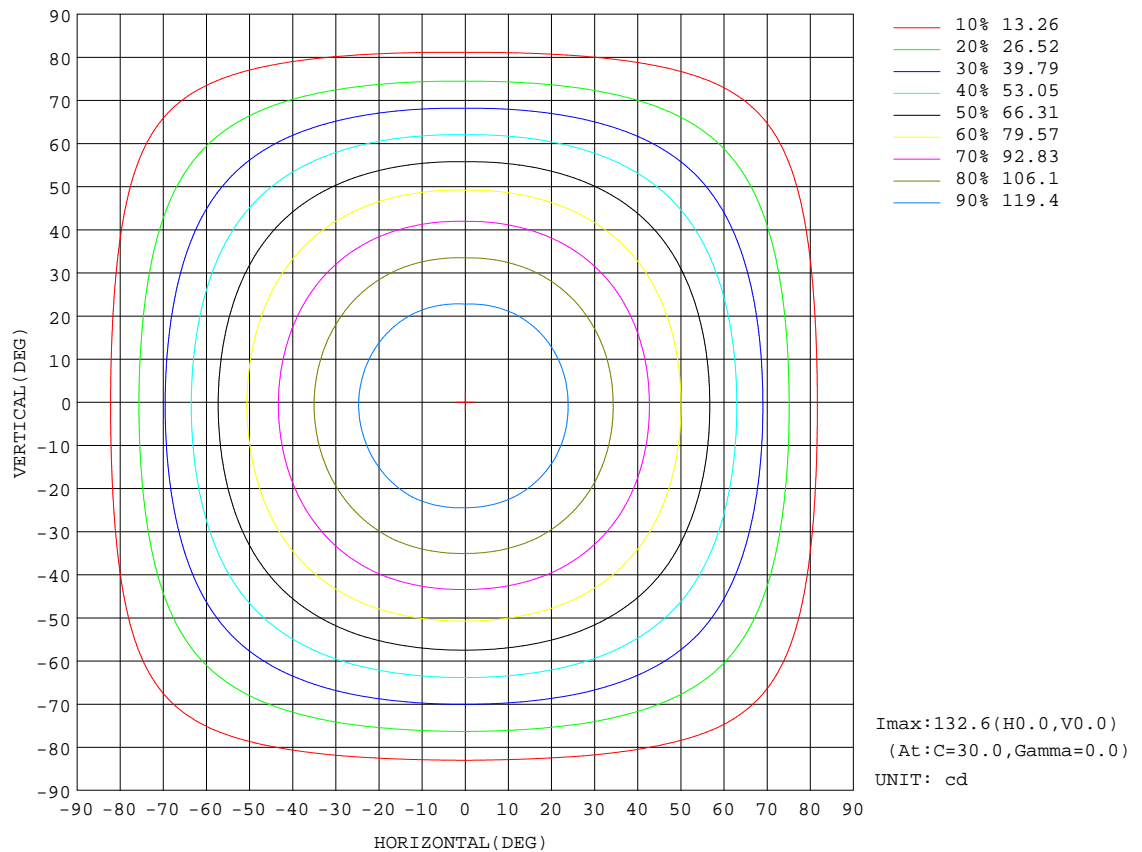
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	55	44	37	54	44	37	53	43	37	30
0.80	65	53	46	64	53	46	62	52	46	39
1.00	73	62	55	72	61	55	70	63	54	47
1.25	80	70	62	78	69	62	76	67	61	54
1.50	85	75	68	83	74	68	80	72	66	59
2.00	92	83	77	90	82	76	86	80	74	67
2.50	95	88	82	93	86	81	90	84	79	71
3.00	99	92	86	97	90	85	92	87	83	75
4.00	103	97	92	100	95	91	96	92	88	79
5.00	105	100	96	103	98	95	98	95	92	82
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNM = 1.25										

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:29 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8TYBBW	WEIGHT: 0.570kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:



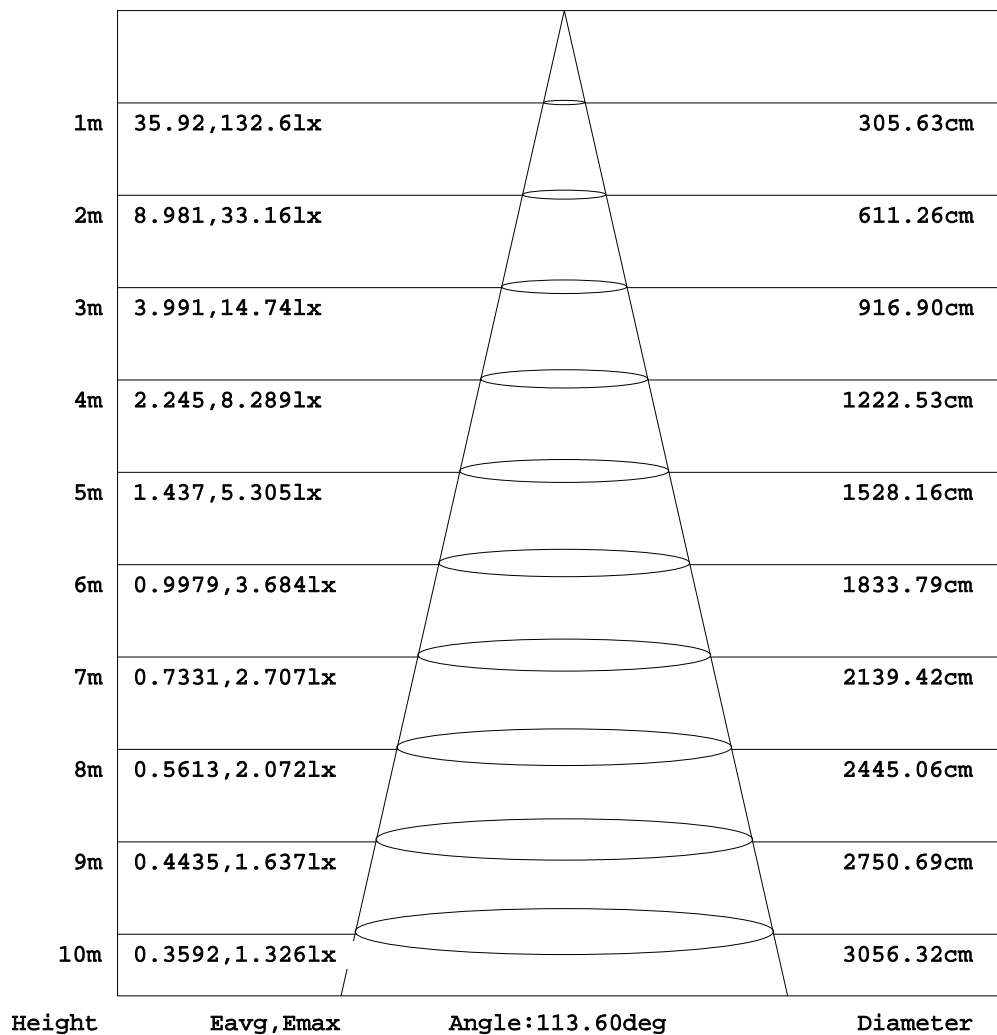
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Dillon
 Test Date: 29 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 6.950m [K=1.0000]
 Remarks:

AAI Figure

NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8TYBBW	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

Flux out:289.0 lm

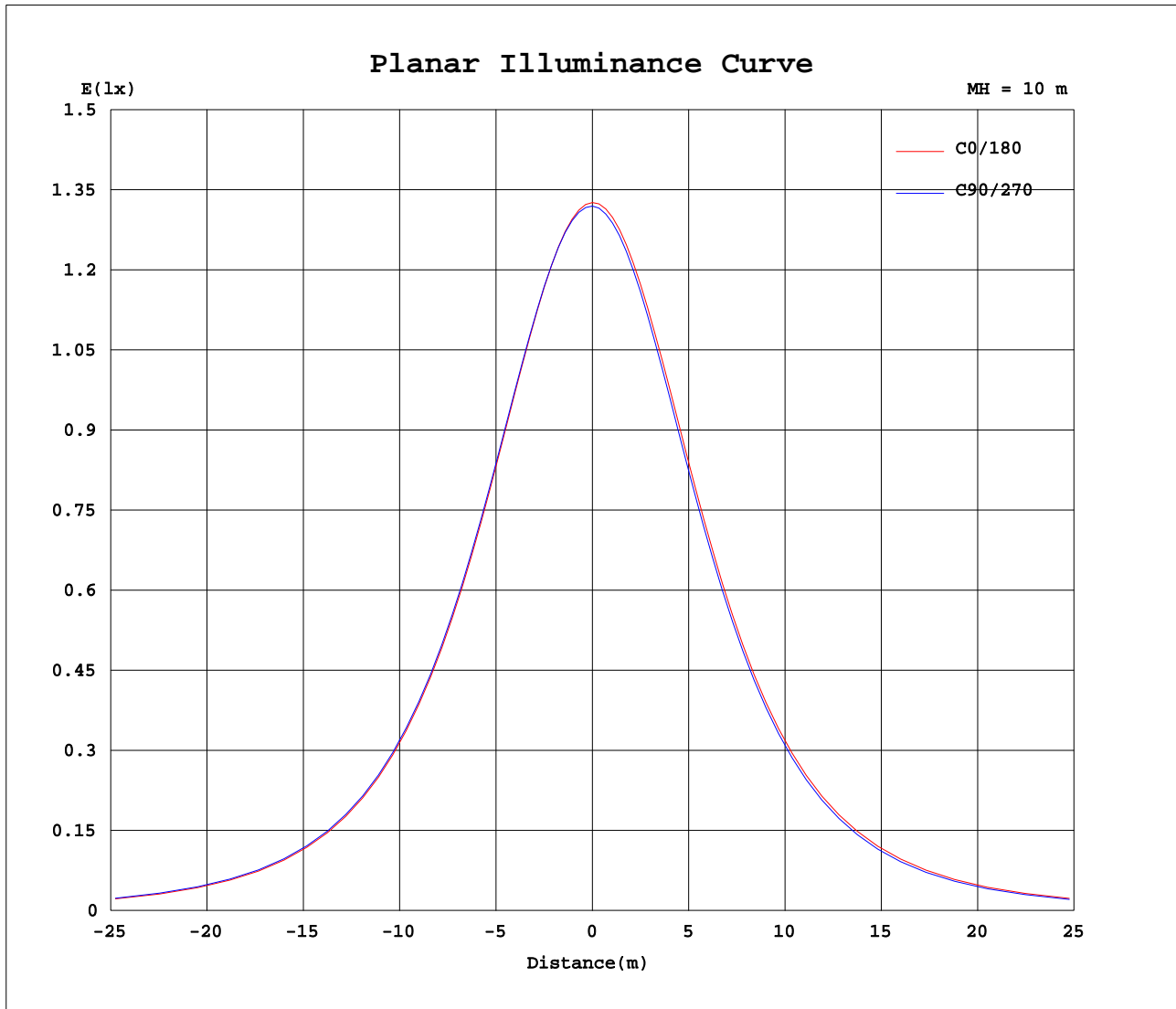


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Dillon
 Test Date: 29 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 6.950m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Dillon
 Test Date: 29 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 6.950m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8BYBWW	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	133	133	132	132	133	133	133	133	132	132	133	133							
5	132	132	132	132	132	132	132	132	132	132	131	132	132						
10	130	130	130	130	131	131	131	130	130	129	130	130	130						
15	128	128	128	128	129	129	128	128	128	127	127	128							
20	123	124	124	124	124	124	124	124	123	122	123	123							
25	119	120	120	120	120	120	120	120	119	118	119	119							
30	112	113	113	113	114	113	113	112	112	111	111	112							
35	107	107	108	108	108	108	108	107	106	105	106	106							
40	97.3	98.2	98.8	98.5	99.2	98.7	98.4	97.7	97.1	96.1	96.7	97.0							
45	90.6	91.5	92.1	91.9	92.5	92.1	91.7	90.9	90.3	89.2	89.9	90.3							
50	79.6	80.7	81.2	81.0	81.6	81.1	80.8	79.9	79.1	78.0	78.7	79.4							
55	71.8	72.9	73.4	73.2	73.8	73.4	73.0	72.1	71.1	69.9	70.8	71.5							
60	59.4	60.7	61.2	61.1	61.5	61.1	60.6	59.6	58.6	57.4	58.2	59.0							
65	50.8	52.2	52.8	52.7	53.0	52.6	52.0	50.9	49.9	48.8	49.5	50.4							
70	37.5	39.1	39.8	39.9	40.1	39.6	38.9	37.8	36.8	35.8	36.5	37.2							
75	28.9	30.3	31.3	31.4	31.5	30.8	30.0	29.0	28.2	27.4	27.9	28.5							
80	16.5	18.0	18.9	19.1	19.1	18.5	17.7	16.8	16.2	15.4	15.9	16.3							
85	8.72	10.3	11.2	11.4	11.3	10.7	9.83	9.05	8.48	7.90	8.27	8.56							
90	0.25	1.41	2.53	2.84	2.66	1.77	0.88	1.24	1.41	1.21	1.24	0.86							
95	0.18	0.55	0.69	0.62	0.83	0.89	0.80	0.85	0.66	0.36	0.52	0.48							
100	0.12	0.18	0.61	0.49	0.70	0.53	0.82	0.60	0.55	0.28	0.36	0.21							
105	0.14	0.18	0.12	0.26	0.24	0.51	0.79	0.55	0.41	0.25	0.21	0.19							
110	0.20	0.19	0.08	0.02	0.13	0.50	0.76	0.54	0.15	0.01	0.05	0.21							
115	0.23	0.21	0.06	0.02	0.12	0.52	0.74	0.53	0.14	0.01	0.07	0.21							
120	0.30	0.24	0.10	0.02	0.18	0.50	0.70	0.52	0.17	0.02	0.08	0.25							
125	0.31	0.27	0.13	0.03	0.17	0.48	0.68	0.51	0.19	0.03	0.08	0.27							
130	0.33	0.28	0.15	0.07	0.20	0.48	0.61	0.48	0.21	0.10	0.14	0.29							
135	0.35	0.29	0.15	0.09	0.22	0.44	0.59	0.44	0.21	0.09	0.14	0.29							
140	0.34	0.31	0.19	0.10	0.23	0.43	0.54	0.45	0.25	0.11	0.15	0.30							
145	0.36	0.32	0.20	0.13	0.25	0.41	0.50	0.42	0.26	0.14	0.15	0.32							
150	0.34	0.30	0.22	0.21	0.26	0.39	0.45	0.39	0.27	0.20	0.17	0.32							
155	0.35	0.29	0.23	0.23	0.26	0.36	0.44	0.37	0.27	0.23	0.16	0.31							
160	0.32	0.31	0.25	0.28	0.27	0.33	0.41	0.36	0.30	0.27	0.20	0.33							
165	0.34	0.32	0.24	0.29	0.32	0.33	0.38	0.33	0.33	0.31	0.23	0.33							
170	0.32	0.32	0.28	0.33	0.34	0.31	0.35	0.34	0.36	0.32	0.26	0.33							
175	0.31	0.32	0.31	0.36	0.33	0.34	0.36	0.35	0.35	0.39	0.29	0.32							
180	0.35	0.37	0.37	0.41	0.35	0.37	0.38	0.37	0.39	0.40	0.37	0.37							

C Range: 0 - 360DEG

C Interval: 30.0DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:Dillon

Test Date:29 July 2021

γ Range: 0 - 180DEG

γ Interval: 2.0DEG

Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.446

Humidity:65.0%

Test Distance:6.950m [K=1.0000]

Remarks: